ANNA UNIVERSITY

COLLEGE OF ENGINEERING, GUINDY

IBM: ASSIGNMENT - 1

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NEHANTH KG

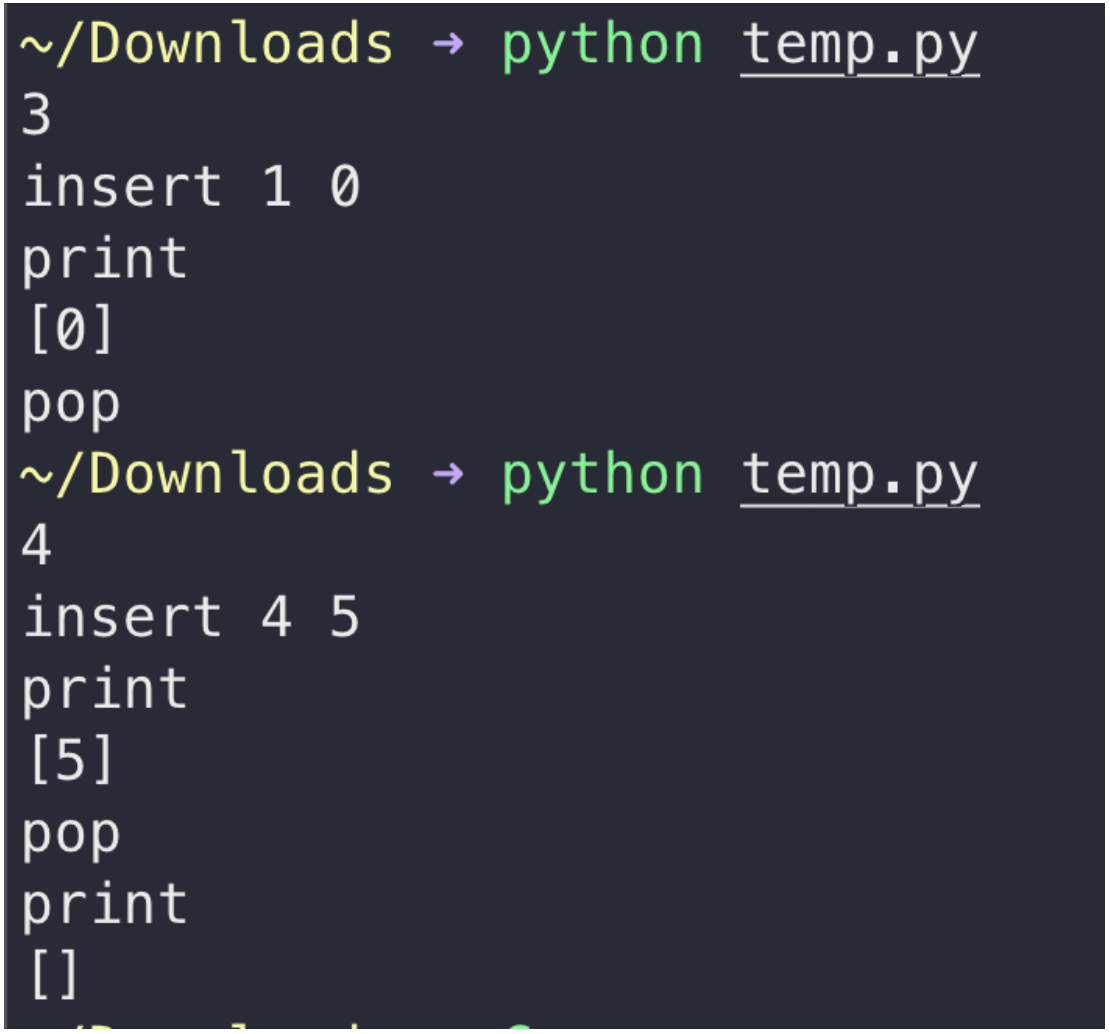
2019115061

1. First Question - PYTHON LIST OPERATIONS

Source Code:

```
number_of_commands = int(input())

my_list = []
for i in range(0, number_of_commands):
    user_input = input().split()
    if user_input[0] == "insert":
        my_list.insert(int(user_input[1]), int(user_input[2]))
    elif user_input[0] == "append":
        my_list.append(int(user_input[1]))
    elif user_input[0] == "pop":
        my_list.pop()
    elif user_input[0] == "print":
        print(my_list)
    elif user_input[0] == "remove":
        my_list.remove(int(user_input[1]))
    elif user_input[0] == "sort":
        my_list.sort()
    else:
        my_list.reverse()
```

OUTPUT


~/Downloads → python temp.py
3
insert 1 0
print
[0]
pop
~/Downloads → python temp.py
4
insert 4 5
print
[5]
pop
print
[]

2. **Calculator.py**

SOURCE CODE

```
# Define the function to add two numbers
def add(x, y):
    return x + y

# Define the function to subtract two numbers
def subtract(x, y):
    return x - y

# Define the function to multiply two numbers
def multiply(x, y):
    return x * y

# Define the function to divide two numbers
def divide(x, y):
    return x / y


# Main driver code to execute above functions
print("Select operation.")
print("1.Add")
print("2.Subtract")
```

```
print("3.Multiply")
print("4.Divide")

# Take input from the user
choice = input("Enter choice(1/2/3/4): ")

# Check if choice is one of the four options
if choice in ('1', '2', '3', '4', '5', '6', '7'):
    num1 = float(input("Enter first number: "))
    num2 = float(input("Enter second number: "))

    if choice == '1':
        print(num1, "+", num2, "=", add(num1, num2))
    elif choice == '2':
        print(num1, "-", num2, "=", subtract(num1, num2))
    elif choice == '3':
        print(num1, "*", num2, "=", multiply(num1, num2))
    elif choice == '4':
        print(num1, "/", num2, "=", divide(num1, num2))
else:
    print("Invalid Input")
```

OUTPUT

```
~/Downloads → python temp.py
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice(1/2/3/4): 1
Enter first number: 2
Enter second number: 3
2.0 + 3.0 = 5.0
~/Downloads → python temp.py
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice(1/2/3/4): 2
Enter first number: 4
Enter second number: 5
4.0 - 5.0 = -1.0
```

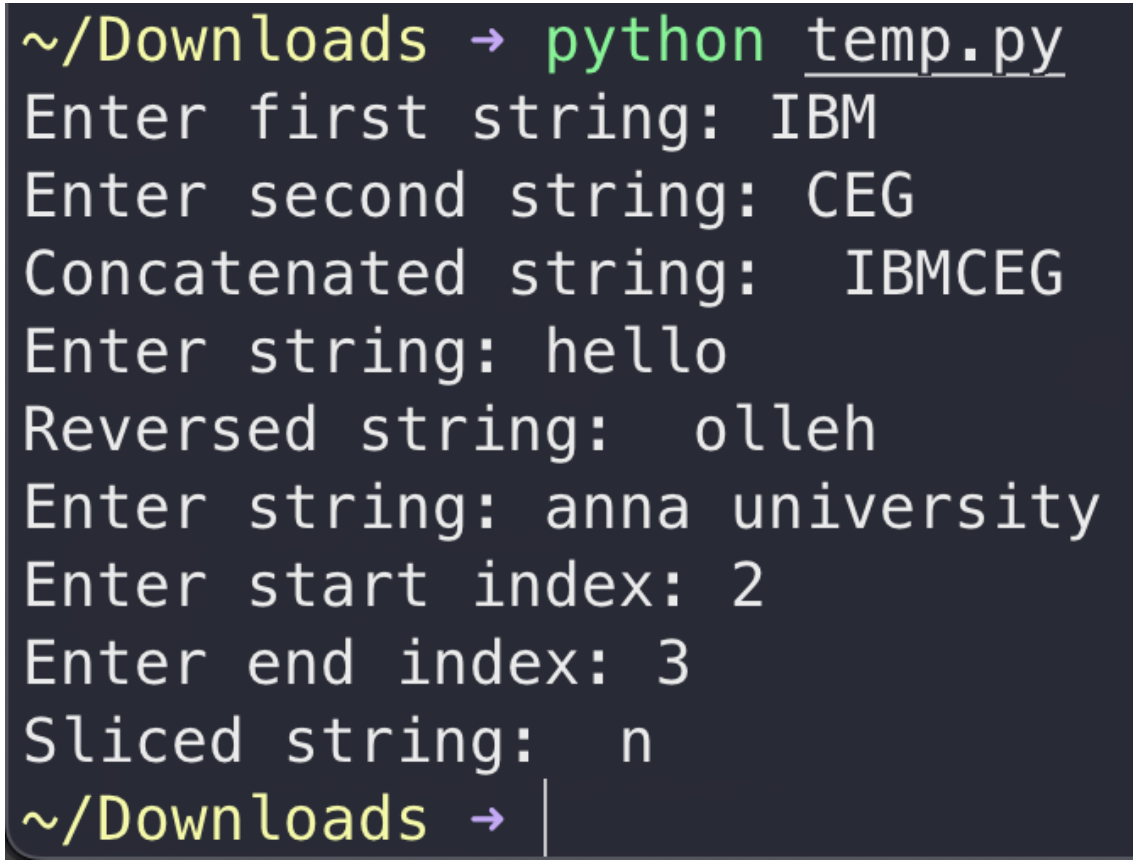
```
~/Downloads → python temp.py
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice(1/2/3/4): 3
Enter first number: 1
Enter second number: 32
1.0 * 32.0 = 32.0
~/Downloads → python temp.py
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice(1/2/3/4): 4
Enter first number: 2
Enter second number: 4
2.0 / 4.0 = 0.5
~/Downloads →
```

3. Third Question – String Operations

```
# Program to concatenate, reverse and slice strings

# Concatenate strings
# Input two strings
str1 = input("Enter first string: ")
str2 = input("Enter second string: ")
# Concatenate strings
str3 = str1 + str2
# Print concatenated string
print("Concatenated string: ", str3)

# Reverse string
# Input string
str1 = input("Enter string: ")
# Reverse string
str2 = str1[::-1]
# Print reversed string
print("Reversed string: ", str2)

# Slice string
# Input string
str1 = input("Enter string: ")
```

```
# Input start and end index
start = int(input("Enter start index: "))
end = int(input("Enter end index: "))
# Slice string
str2 = str1[start:end]
# Print sliced string
print("Sliced string: ", str2)
```

OUTPUT


~/Downloads → python temp.py
Enter first string: IBM
Enter second string: CEG
Concatenated string: IBMCEG
Enter string: hello
Reversed string: olleh
Enter string: anna university
Enter start index: 2
Enter end index: 3
Sliced string: n
~/Downloads →

4. **Why is Python a popular programming language?**
    a. **Python is easy to learn**
    b. **Python has an active, supportive community**
    c. **Python is flexible**
    d. **Python offers versatile web-development solutions**
    e. **Python is well suited to data science and analytics**
    f. **Python is efficient, fast, and reliable**
    g. **Python is widely used with IoT Technology**
    h. **Python empowers custom automation**
    i. **Python is the academic language**

5. **What are the other Frameworks that can be used with python?**
    - **AIOHTTP**
    - **Bottle**
    - **CherryPy**
    - **CubicWeb**
    - **Dash**
    - **Django**
    - **Falcon**
    - **Giotto**

6. **Full form of WSGI?**
    - **The Web Server Gateway Interface. It is pronounced whiskey or WIZ-ghee, is a simple calling convention for web servers to forward requests to web applications or frameworks written in the Python programming language.**